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Think Piece:

Labour Force Survey Data for South Africa

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Labour Force Survey Data for South Africa:

A Brief Assessment

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EXECUTIVE SUMMARY AND RECOMMENDATIONS

In this briefing we provide a brief assessment of South African labour force survey data, focused particularly on the current survey instrument, the Quarterly Labour Force Survey (QLFS). Drawing on relevant literature and feedback from analysts who regularly use these data, we discuss challenges specific to the QLFS, offer potential interventions to improve the QLFS at the margin, and offer a set of potential extensions that aim to expand the exploratory reach of the survey. Interventions to improve the QLFS at the margin include, the better capture of employment and earnings data, and clarity on changes to the survey approach. Potential extensions to the QLFS include: a deeper assessment of job quality and the employment relationship, the further capture of information on household grant receipt, particularly among the employed, the capture of data on secondary and tertiary education institution names, the collection of policy relevant data that would aid evidence-based policy formulation, and the capture of data on both internal and external migration. Importantly, the choice of extension should be conducted with policy priorities in mind, and should incorporate the insights of various stakeholders, including policy makers and research analysts who regularly employ these data.

[1] *The authors would like to acknowledge Morné Oosthuizen, Amy Thornton, Benjamin Stanwix and Tim Köhler for sharing their insights on issues pertaining to the implementation and use of the QLFS.*

TABLE 1: LABOUR FORCE SURVEY DATA ACROSS DEVELOPING AND DEVELOPED COUNTRIES

	LFS not implemented recently and/or not implemented on a quarterly basis	LFS implemented recently and compiled on a quarterly basis	Total
Developed	17	43	60
Developing	86	22	108
Non-African	*53*	*20*	*73*
African	*33*	*2*	*35*
Total	103 *(61.3%)*	65 *(38.7%)*	168

Source: ILOSTAT (2020)

Notes: 1. Developed and developing comprise high-income (OECD and non-OECD) and middle- or low-income countries, respectively. 2. Column two captures countries that have not recently implemented a LFS and/or implemented an LFS on a quarterly basis. We define recently as an LFS occurring in 2020, and thus this column captures countries where the most recent LFS ranges from 2010 to 2019. 3. Column three captures countries that have implemented an LFS recently in 2020, and conduct an LFS on a quarterly basis.

This paper provides a brief assessment of South African labour force survey data, focused particularly on the current survey instrument, the Quarterly Labour Force Survey (QLFS). We start by identifying challenges specific to the QLFS, and offer potential interventions to improve the survey. We then offer a set of potential extentions to the QLFS, which seek to expand the exploratory reach of the survey. The discussion is informed by a combination of existing literature on the subject and discussions with analysts who regularly use these data for research purposes.

2. CHALLENGES SPECIFIC TO CURRENT SURVEYS

For the policy maker and analyst alike, the ability to analyse key labour market data, such as the evolution of employment and earnings over time, is important, and thus the accurate measurement of key labour market indicators is vital. Kerr and Wittenberg (2017; 2020) identify a number of measurement issues with the QLFS data, and detail how these issues adversely affects one's ability to examine trends in earnings and employment, which in turn negatively affects one's ability to analyse certain labour market issues, such as trends in income inequality.

Kerr and Wittenberg (2020) identify a key problem with the earnings data reported in Statistics South Africa's Labour Market Dynamics release, which relates to the imputation of earnings for some individuals.[2] They note that for earnings data up to and including

[2] *The Labour Market Dynamics data release is an annual compilation of the QLFSs for a given year, which contain the relevant earnings data. Kerr & Wittenberg (2019) note that the main reason for this compiled annual release of earnings data seems to be that Stats SA does not have the capacity to prepare earnings data for each quarterly release of the QLFS, which is partly due to the substantial imputation that the data undergo.*

Q2 2012, Stats SA imputes earnings for both those with bracket responses and those who refuse to provide an answer, and that there is no way to distinguish actual rand value responses from bracket responses or refusals, and there is no way to distinguish between bracket responses and refusals. Further, the imputation process changed as of Q3 2012, where refusals are no longer imputed, while bracket responses are - and there thus is no way of distinguishing between bracket and actual rand value responses.

Kerr and Wittenberg (2020) state that this treatment of earnings data is problematic for two reasons: First, if one takes a series of earnings data from the three post-apartheid household survey instruments, one finds that description of earnings over time are going to use three different types of earnings data. These include, unimputed earnings data for the October Households Surveys (1994-99) and the Labour Force Surveys (2000-07), completely imputed earnings for the QLFSs from 2010 to Q2 2012, and partially imputed earnings for Q3 2012 onward. As such then, measured changes in earnings patterns over time, may be the result of imputation effects rather than actual real changes.[3] One is unable to determine how reliable the imputations are, and thus disetangle these effects, without the ability to distinguish between actual and imputed earnings. Second, the statistical uncertainty of the earnings data obtained from the imputations is likely to be biased downwards, since analysts are treating these data as actual responses. However, in reality, there is likely to be greater uncertainty regarding the true values of these imputed responses, particularly for earnings imputations for individuals who refused to answer at all, which occurred from 2010 to 2012 Q2 (Kerr & Wittenberg, 2019).

Therefore, in order for analysts to determine the reliability of the imputations, and compute true estimates of statistical uncertainty for earnings estimates, Kerr & Wittenberg (2019) state that Stats SA should release imputation flags. Imputation flags allow analysts to distinguish between actual and imputed earnings. For example, using the OHS and the LFS, Kerr & Wittenberg (2017) show how the likelihood of non-response and bracket response differs across those employed in the public and non-public sectors. However, they are unable to do the same when using the QLFS data, since they cannot identify bracket responders who have imputed earnings estimates that are not flagged.

With respect to measuring employment trends using the QLFS, Kerr & Wittenberg (2019) note two further concerns: First, they point out that the changing definition and measurement of the informal sector in Q3 of 2009, means that the analysis of employment trends either side of this period are not comparable. Further, they note that the change in definition is somewhat ambiguous, possibly incorrect, and can lead to some obtuse coding outcomes.[4] Second, Kerr & Wittenberg (2019) state that the statistical uncertainty reported in the QLFS release documentation is incorrect and always understated. The implication being that if estimated uncertainty is too high, then it is not possible to say with certainty whether measured changes in employment are real, or simply an artefact of the particular sample of households chosen in the sample.

Another issue pertains to Stats SA's communication of changes to the survey and how these changes are likely to impact the disseminated data. For example, an analyst noted an instance where substantial quarter-on-quarter employment growth in the Western Cape agriculture sector was recorded in the first quarter of 2015. This growth was arguably implausible giving that the Western Cape was undergoing its most severe drought in the past century. It was later discovered that the changing of Stats SA's master sample for the QLFS over this period affected the selection of surveyed households, which in turn impacted on the measurement of employment. Hence, the employment growth was an artefact of the sampling adjustment and not necessarily a real change in the labour market. Improved communication of such changes and their likely impact would be a valuable source of information for analysts going forward.

A key challenge to current iterations of the QLFS relates to the data collection taking place during the COVID-19 pandemic and thus being subject to the constraints imposed by the government's response to the pandemic. Most notably, as a result of the lockdown, Stats SA announced that the collection method for the second quarter of the QLFS will be changed from face-to-face collections to telephonic interviews using Computer Assisted Telephonic Interview (CATI) technology.[5] Shifting the mode of data collection is likely to add further data collection challenges. For example, individuals with cell phones are more likely to participate than those without cell phones, which in turn affects the sampling. In turn, individuals residing in rural areas with weak cell phone signal may not be able to be reached by telephonic interviewers. Further, non-response rates are likely to be biased toward the employed, living in urban areas, who are positioned in the top per capita quintile. However, it is worth noting that a recent media release indicates that Stats SA is taking a great deal of care to insuring the quality of the Quarter 2 release of the 2020 QLFS, and as a result the release has been delayed.[6]

[3] For example, Kerr & Wittenberg (2017) estimate the public sector wage premium for South Africa and compare the difference in premia when using the publicly available imputed data for 2012 and unimputed data that they obtained from Stats SA. They find that the imputation makes a substantial difference in the estimated size of the public sector premia. Kerr & Wittenberg (2019) show that Gini coefficient estimates derived from imputed earnings taken from the QLFS data fluctuate wildly between 2013 and 2015. They find this trend in inequality to be highly unlikely and contend that the imputations is the likely suspect of this volatility.

[4] Budlender (2011) and Kerr & Wittenberg (2019) point out that the direct question on informality disappeared in the Q3 QLFS 2009. Stats SA created their own definition where employees are defined as being in the informal sector if they 'are not registered for income tax and…work in establishments that employ less than five persons'. One of the ambiguities of the definition is that low-paid workers (below income tax threshold) in a small establishment (five employees or less), such as a finance or medical practice, would be defined incorrectly as working in the informal sector.

[5] This is reported in the Stats SA media release on 7 May 2020 (Available at: http://www.statssa.gov.za/?p=13301).

[6] This is reported in the Stats SA media release on 7 May 2020 (Available at: http://www.statssa.gov.za/?p=13580).

3. POTENTIAL EXTENSIONS OF THE QLFS

Statistics SA has been conducting household surveys, allowing for the analysis of the South African labour market, for the entire post-apartheid period, and thus researchers have a fairly strong grasp of fundamental labour market issues. There is thus scope to extend the analysis of the South African labour market to related, yet underexplored issues.

A key labour market issue that remains relatively underexplored in the South African context is the quality of an employed individual's job. The QLFS currently has information on whether the employed have an employment contract, access to leave, access to medical aid, and access to UIF. However, there little known about the work context of the employed. For example, whether an employed individual has job satisfaction, whether s/he has a voice in their current employment context, whether s/he perceives themselves to have a career trajectory, whether s/he receives training, and other such qualitative job quality information. These important labour market issues are explored in the developed country context, but remain underexplored in the South African context due to the paucity of these types of data. There is thus scope for Stats SA to include such questions in the employment module.

Relatedly, there is scope to capture further information on the employment relationship, in particular, whether an employee is working directly for an employer or through a labour broker. Work through a labour broker, or temporary employment services, is an important element of the South African labour market. Bhorat, Cassim and Yu (2016) estimate that there are just under 1 million temporary employment service jobs in South Africa in 2014, which constituted approximately 6 percent of all employed at the time. The method to identify temporary employment service jobs using the QLFS is based on estimating the number of jobs falling within the industry code 'Business Activities Not Elsewhere Classiffied'. This approach imperfectly captures temporary employment service jobs. Thus, a direct question in the employment module of the QLFS would allow for a more accurate assessment of this important element of the South African labour market.

One potential extension relates to the improved capture of information on grant recipients. Currently, the QLFS only captures grant receipt information from the unemployed or the economically inactive in Section 3 of the survey instrument. It thus excludes a number of the employed who receive grants, and thus creates a sample selection issue when analysing the relationship between grant receipt and labour market outcomes, such as labour market participation. Furthermore, there is scope for extending the detail in which grant information is captured at the individual and household level. This would involve capturing data on whether individuals in a household receive grants, and if so, which grants do they receive. These data become increasingly important in the current context, where the government has expanded the grant system in reponse to the economic fallout resulting from the lockdown.

Another potential extension could be the collection and dissemination of panel data, which would allow researchers to analyse labour market dynamics at a more detailed level – for example, transitions between various labour market status. While both the QLFS, and its earlier iteration, the Labour Force Survey (LFS), applied a rotating panel design, these data are largely unavailable (only Q3 to Q4 of 2013 is publicly available).

Another long-called for addition to the QLFS is the capture of data on secondary and tertiary institution names. In particular, the survey instrument should capture data on the name of the educational institution and its location. Such data would allow analysts to link these data to other data sources, such as the Higher Education Management Information Systems (HEMIS) dataset. These data can provide important insights to understanding the link between labour market outcomes and the quality of education. At present, researchers are able to explore the link between labour market outcomes, such as the returns to education, and the quantity of education. Being able to link the QLFS data to the HEMIS data would allow for the inclusion of education institution variables that control for the quality of education, and thus allow the analyst to explore the link between the returns to education and the quality of education.

The collection of policy relevant data, that would aid the formulation of evidence based policy, is another potential area of extension and improvement. For example, the effectiveness of active labour market policy (ALP) in South Africa, such as the public works programme (PWP), could be measured, critically assessed, and appropriate amendments devised to improve the reach and effect of the policy, if the relevant data were to be captured. While the QLFS does capture data on the PWPs, Meth (2011) notes that there is much scope for improvement. For example, he argues that exploiting the rotating panel element of the QLFS would allow for a better assessment of PWPs.

Further extension of the QLFS could include shifts to related areas of analytical importance and policy priority. Budlender (2013) make a case for the inclusion of a QLFS migration module, which captures data on both domestic and foreign migrant labour – both important elements of the South African labour market. Alternatively, much of the task related research (Autor, Levy and Murnane, 2003; Bhorat, Lilenstein, Oosthuizen and Thornton, 2020) exploring labour market issues, such as offshoring and skills biased technological change, use a United States occupation-level task classification system collected by the Occupational Information Network (O*NET). A labour market module capturing such data in the South African context may provide valuable insight to the impacts of offshoring and skills biased technological change on the South Afican labour market.

It is worth noting that extending the survey instrument to capture additional sources of information, such as those listed above, would enlarge the size and cost of the QLFS. Three

potential solutions arise: First, the frequency of the QLFS could be reverted back to a bi-annual survey. Second, and relatedly, this bi-annual survey could be linked to other surveys, such as the General Household Survey (GLS) and the Transport Survey, in order to broaden the available data, thus allowing researchers and policy makers to assess a broader range of issues relating to the labour market. Certainly, it has been argued by the likes of Meth (2009) and Budlender (2013) that the quarterly frequency of the QLFS is superfluous. Third, the QLFS can remain a quarterly survey, but with rotating modules that focus on key labour market issues that do not require quarterly data capature. Further, the GLS labour market module could be advanced from its current basic form.

4. CONCLUDING REMARKS

Undoubtedly, South Africa as a middle-income economy, produces high quality, regular, labour force survey data. These data provide information on key labour market indicators and as a result analysts and policy-makers alike are well versed in the fundemantal labour market issues facing the country. With the purpose of improving the current data output and offering, this briefing note considered a number of issues that could improve the QLFS at the margin – the better capture of employment and earnings data, and clarity on changes to the survey approach. Further, this paper outlined a number of approaches to extend the QLFS including for example, the capture of data on job quality, employment relationships, details of individual and household grant receipt, and information on secondary tertiary institution name and location. Importantly, the choice of extension should be conducted with policy priorities in mind, and should incorporate the insights of various stakeholders, including policy makers and research analysts who regularly employ these data.

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